

THE CURBING OF THE SPIRIT OF INQUIRY.

BY CARUS STERNE.

ON high authority we are told to day that there are a number of world-enigmas which the human mind has never solved and never will solve. If we also recognise these enigmas as apparently the most important and most worthy of solution, we are overcome for a moment by despondency, in which comes the suggestion: forsake the hopeless path of investigation; be content; believe in what the Church offers you as irrefutable and certain truth, and be happy in your ignorance. Nowhere is the inscription over the gates of Dante's Inferno, "All hope abandon ye who enter here," more appropriate than over the portal of the proud temple of philosophy.

For such discouragement there is but one remedy: the study of the natural sciences in their historical development, a retrospect from their present attainments to their beginnings; not because "such splendid progress we have made," but because we can now for the first time fully appreciate how much we have been expected to accept on faith as irrefutable truth, and recognise under what enormous difficulties we have been compelled to labor in gaining the modest store of knowledge which constitutes the present glory of the race. It is as instructive as it is remarkable that those who were the first to propose giving up the Sisyphean task of investigation, have always been the least inclined to act accordingly. Thus it was, for instance, with Socrates, who liked to boast of his own ignorance, and who according to Xenophon called all foolish who labored to investigate natural laws and celestial phenomena. And yet he himself was never weary of learning, to the great displeasure of the populace, whose point of view is represented by Aristophanes who pictures Socrates seated in a basket high above

¹ Translated from the German by Prof. L. L. Jackson, State Normal School, Brockport, N. Y.

the heads of the people, discussing useless questions. Surely such occasional utterances will lead no one to include Socrates among those *beaux esprits* of whom Propertius says:

"None of these crave to know the inner truth of the cosmos,
Nor how from her radiant brother Luna deriveth her light;
Whether beyond the Styx extendeth the span of existence,
Nor whether the thunder-bolt with deliberate purpose is aimed."

Such reflexions on the inadequacy of human understanding have arisen inevitably whenever reason and growing knowledge have conflicted with a system of religious views which had originated in earlier times and been regarded as final. Even Cicero in his dissertation *De deorum natura* has his academician, Balbus, condemn in a similar way the Danæan gifts of the human understanding and the misleading speculations of philosophy, just as the Apostle Paul a hundred years later did from his point of view.

"Everything," says Balbus, "goes to show that quite as much evil as good is accomplished through reason; the good by few men and rarely, the evil by most men and often; so that it were actually better had the gods denied men reason altogether, since they are constrained to combine with it so much evil. Wine is seldom beneficial to the sick, and generally injurious, so that it is safer not to give it at all than to risk life in the uncertain hope that it may be useful. Just so I am convinced that to have withheld from the human race altogether that activity, keenness, and precision of thought called reason would have been better than to give it in the abundant measure which is so destructive to most people and useful to very few."

Now if Cicero, who was tolerably free from religious prejudices, expressed himself in this way, how can we blame the teachers of Christianity if they occasionally inveighed against the philosophical productions of human reason which they could not harmonise with Scriptural accounts. "Beware lest any man spoil you through philosophy and vain deceit," wrote Paul to the Colossians when he saw that his arguments were no match for those of the philosophers at Athens and elsewhere. The Christian fathers accordingly felt forced to avoid strife, and to deny to unbelievers the right of research, asserting that they themselves possessed the truth. In this connexion there is nothing more instructive than the principles which Tertullian (died A. D. 220) advanced in his treatise *De Præscriptione Hæreticorum*, the heretics having appealed to the Scripture, "Seek and ye shall find." Even "if the heretics," said he, "were not enemies of the truth and we were not warned before-

hand to avoid them, how under any circumstances could we bring ourselves to dispute with men who themselves confess that they are still investigating? If they are still seeking for truth, it is surely because they have found nothing certain, and by their further investigation they merely show that they regard all previous conclusions as doubtful. . . . For us Christ has made all inquiry unnecessary, and the Gospel has made all search for truth superfluous. . . . With faith all seeking and finding cease. . . . No one is wise but the believer."

These utterances are more significant than the declarations of the same Church Father, spoken in wrath and half ironically, "I believe because it is absurd" (*credo quia absurdum*), and, "It is true because it is impossible," for they indicate the attitude which later apparently justified the Church Fathers in their opposition to the demands of investigators for a hearing. I say apparently, for they would really have been justified only in case they themselves had also given up the investigation and disingenuous interpretation of the Bible and placed childlike faith in every word as it stands. Then only would they have been justified in concluding, as Tertulian does in the same dissertation, "Hence we establish first of all this principle: heretics are not to be permitted to take part in any disputation concerning the Scriptures."

In sharp contrast to this Church Father's opinion that believing Christians possess the truth and need not investigate, is the fact that the Church Fathers never wearied of searching the Scriptures and vexing their poor brains in the attempt to comprehend the incomprehensible things contained therein, instead of simply believing them. What infinite labor and fathomless ingenuity did the theologians waste on the first chapter of the Bible alone, instead of straightway recognising with Faust the uselessness of such efforts, and furthermore they subject themselves to the reproach of carelessness, in creating difficulties where none existed. Thus, for example, John Chrysostom from the mere order of the words of the first verse of the Bible, "In the beginning God created heaven and earth," drew the conclusion that the creator did not begin the universe with a foundation, as men begin their houses, but began with the roof; or, as the Mansfeld priest, Simon Musæus, (died 1576), expressed it in his drastic way, "But God just reversed [man's method] and made first the sky for an arching roof, and left it swinging unsupported until on the third day he placed the earth beneath it."

Endless discussions were called forth by the circumstance that

in verses 3-5 the creation of light and of day and night occurs several days before the creation of the sun and the moon, of which it is said that they are to divide the day from the night and to number the days and years. With the limited intelligence of a savage who believes that the heavenly luminaries are daily kindled and extinguished, Basil the Great in his commentary on the six days of creation conjectured that the first days of the world, before the appearance of the sun, were divided into day and night by the alternate expansion and contraction to the vanishing-point of the original light. Fortunately a converted Neo-Platonist of the early Middle Ages, whose writings appeared in the sixth century over the name of Dionysius, the Areopagite, helped his fellow-believers out of their difficulty. Using certain ideas of Gregory of Nyssa, he devised the idea of original and formless light out of which, on the fourth day of creation, the sun was fashioned, but which by revolving about the earth had already produced day and night. It was a lucky thought which the mystics of the Middle Ages eagerly took up and expanded. With this interpretation there was no longer any difficulty in reading that the plants sprang out of the earth before the sun had been created, and this dogma gave St. Basil especial satisfaction, because it utterly confused the idolatrous sun-worshippers, who maintained that the sun should receive supreme worship, because all earthly life is developed by its rays.

The unquenchable thirst for investigation carried the interpreters of the Bible to the farthest extreme, and they could not be content until they had determined the hour and season when the world was created. Since on the very first days of creation herbs and trees sprang up from the new earth, Damascenus, Theodoret, Ambrose, Gregory of Nazianzus, and the majority of the earlier Church Fathers held that the world was doubtless created in the spring, the loveliest season of the year. And Petrus de Alliaco added in his *Imago Mundi* (A. D. 1410) the more precise time, claiming that the formless light, as well as the sun itself, was created when at zenith in the sign of Aries, that is on a March noon. Concerning the moon Ephraem Syrus had already expressed the opinion that it was created at full, as it appears on the fifteenth Nisan at the time of the vernal equinox. Scarcely a zealous theologian of later times who spoke or wrote concerning the creation ventured to pass over this weighty question without forming an opinion. Among the authoritative Catholic Churchmen Duns Scotus, Cajetan, Molina, and Cornelius a Lapide held the opinion that the world was created in the spring. Luther and Melancthon besides most of

their followers accepted this view, as also did the Calvinists, Isaac Vossius and Scaliger. On the other hand there were distinguished Catholic scholars who advocated just as ardently the autumn; among these were Arias Montanus, the editor of the Antwerp Polyglot Bible, Pererius, and Père Mersenne. Among the followers of Luther the view was held by Calvisius, the famous chronologist of Leipsic. Their reason was that the trees of Paradise instead of bursting into bud and blossom, immediately after their creation had borne fruit, and Hogel, rector of Gera, figured it out that God had begun the work of creation on the evening of October 26th. Gerhard Mercator, the famous geographer, advanced a third view, that the creation took place in mid-summer, but he seems to have secured only a meagre following.

From all of this we see that the theologians were not by any means so hostile to the investigation of nature as they are often represented to be, and as they must needs have been had they held Tertullian's views. While in the above-mentioned questions it mattered little which side one took, yet there were more serious subjects on which it was not safe to have a different opinion from that of the leaders and rulers of the day. We will pass by entirely in this connexion theological and even purely philosophical questions, as, for example, whether the earth was created out of nothing, and confine ourselves altogether to purely physical things in order to show how quickly rational thought was suppressed on the authority of a document which reflects the far from imposing scientific knowledge of the Jewish scholars of the fifth century B. C. Furthermore, views which do not appear in the Bible at all, nay, are not even hinted at, were read into it and embodied in established articles of faith merely because it seemed to certain theologians that certain passages admitted of one and only one definite interpretation. Not only the authors but also the expounders of the Bible came to be considered inspired.

Such a notion could not fail to lead to strange conclusions. In the first verse of the Bible, the all-encompassing sky is mentioned, and very naturally, before the earth, but the author certainly did not dream of interpreters so childish as to compare the creation of the world with the building of a house and say that it was begun at the roof. Familiar and universal expressions, used only in a figurative sense, such as the four quarters of the earth, the four winds and the four corners of the earth, because they had by chance found their way into the Bible, were forced to serve as proof that the earth has four corners, and cannot therefore be a

sphere. Popular notions which reflect, the world over, the immediate perceptions of the senses, and consequently found expression also in the Bible, for instance that of the apparent motion of the sun about the earth, were thought by this fact to have become indisputable evidence that the earth actually remains firm and immovable in the center of the sun's plane. Doubtless the worst of it all was that the opinions, which the Church teachers with their limited understanding of natural science had expressed concerning the uncertain meaning of certain Scripture passages, were afterwards pronounced to be as unimpeachable as the Bible text itself; and that consequently it became the most dangerous heresy to believe in the existence of the antipodes, in opposition to the opinion of St. Lactantius, to believe that death is the natural end of life, in the face of the opinion of St. Augustine, or to believe that the earth moves about the sun, in opposition to the conviction of the entire body of Church Fathers.

The significant feature of the whole situation is that the Church was endeavoring to establish for its schools a fixed system of doctrine which should fetter reason in matters of belief by trying to exempt definitively from all future criticism not only those doctrines which might be regarded as derived from direct revelation, but also those resulting from human interpretation. When the Church had once spoken through a council or through the mouth of the Pope, no opposition based on reason, no hesitation or doubt based on better information as to the actual facts, was to be permitted; the "sacrifice of the intellect" was demanded without distinction of every one. The knowledge of natural phenomena, still so limited, was not considered a science which was to grow, but as a store from which all succeeding generations were to draw. This is the explanation of the remarkable fact that under the sway of Christianity the natural sciences made no progress worthy of mention for nearly fifteen hundred years, that all research was confined to the comparison and working over of old texts. Belief based on authority, which expected truth only in what had already been thought and written, was carried to dangerous excess, for it was considered heresy to search for additional truth in nature or in one's own understanding. But inasmuch as doubts and varying views occasionally arose and were fostered even among Christians, by the writings and expositions of heathen philosophers and investigators, there developed among Christian teachers a hatred and contempt for all investigation not emanating from the Church, which appear the less justifiable since the system of Church doc-

trine had been built up only by means of diligent investigation and ardent discussions of the most subtle questions.

In this spirit Eusebius, the father of Church history, the learned but uncritical bishop of Cæsarea (died 340), called the inquiry of heathen philosophy into the nature of the soul "a useless, misleading, and vain waste of time," adding: Christians whose thoughts turn toward higher and better things, think lightly of such studies, not so much from ignorance as from contempt for useless labor. Basil the Great, several decades later, gave his opinion concerning the worthlessness of science even more unequivocally: "Christians have something better to do than to investigate the utterly trivial question whether the earth is spherical, flat, cylindrical, or cup-shaped." We have already seen how profoundly ignorant he was, and that he preferred the barbarian's theory of the heavenly luminaries to all others.

The Christian fathers, most notorious for their lofty contempt of science are Lactantius (died 330), who on account of his polished language was called the Christian Cicero, and St. Augustine (died 430), both of whom were probably sometimes rebuked by their contemporaries on account of their blind zeal against the theory of the antipodes. The former relieved his mind in the treatise *Concerning False Science*, as follows: "To investigate the fundamental causes of natural things, or to try to learn whether the sun is as large as it looks, or whether it is many times as large as the whole earth, or whether the moon is spherical or hollow, whether the stars are fixed in the firmament or move freely through the air, what are the dimensions of the heavens themselves, or out of what material they are made, whether they are fixed and motionless or revolve with infinite velocity, how thick the earth is, and upon what foundation it is balanced or suspended,—to wish to settle all these things by disputation or speculation is like trying to give a complete description of a remote city, which one has never seen and knows only by name."

This judgment contains the false assumption that the ancient mathematicians and astronomers arrived at their conclusions concerning the size and distances of the heavenly bodies by guess only and not by exact observation and measurement. We shall later have occasion to compare it with the assurance with which Lactantius decided questions concerning which he had not even presumptive evidence. When St. Augustine in a similar strain speaks of the "horrible zeal of the surgeons, who are called anatomists" and thinks that they have discovered none of the mysteries of life,

“although they have dissected the bodies of the dead, and have even inhumanly probed into the bodies of the dying with knife in hand,” we are reminded of the opposition to the vivisection of animals in our own day.



ST. AUGUSTINE.

(354-430.)

After a painting in the Uffizi Gallery.

Of course a complete exclusion of the opinions of heathen philosophers was the more difficult, because the principles of many philosophical schools were most excellently adapted to form the

foundation of the prospective ecclesiastical structure. Platonism particularly (introduced by Philo, the Jew, born 20 B. C.) was sponsor for certain New Testament dogmas; and Plato's notion of archetypes or "eternal ideas" (which were considered as real things present in the supernatural world of the Demiurge even before their embodiment in plant, animal, and human form) appealed the more to Augustine and other Church Fathers, since by means of these they could evade Origen's somewhat bold idea that God had created everything at once in one creative day, "in a trice," as Luther expressed it, and could base upon it all sorts of cunning subterfuges of a mediate creation or gradual embodiment of the archetypes, as, for example, in the case of those animals supposed to have sprung from the blood or decaying bodies of other animals. Neo-Platonism, with its ideas of ecstatic exaltation, intermediate beings, and emanations from the Godhead, was also not without important influence upon the doctrines of the new Church, although its pantheistic elements were for the time being excluded.

Somewhat later than Plato, and in a disconnected way, Aristotle acquired an influence upon the Church tenets, first by his cosmology, in the simplified form given it by Ptolemy, and afterwards through the other parts of his system for which Arabic and Jewish scholars served as interpreters and expounders. Despite the fact that the physics and metaphysics of Aristotle had been condemned by the Synod of Paris (1209), Albertus Magnus owed his extensive learning and his title, Doctor Universalis, chiefly to the study of Aristotle, and soon after his pupil, Thomas Aquinas, with open arms received the old heathen into the bosom of the one saving Church. Aristotle was soon considered the great light in the darkness, and even a very John, the forerunner of Christ on earth (*præcursor Christi in rebus naturalibus*). If we consider that in the cosmology of Aristotle, everything was arranged in accordance with design (the earth and man at the center of all things, the *ideas* of Plato no longer flitting about but still living innate within substance, the soul preceding the body, the idea, the form, and back of all terrestrial motion God as the primal and only immovable source of motion), then we can easily understand how Aristotle, soon after his re-discovery, inevitably became the favorite philosopher of the Church and the official philosopher of the Pope. We thus see how the present Pope, Leo XIII., could even dream for a moment of galvanising this philosophical corpse into life and setting him up in opposition to the wicked Darwin. Of course, the salty old pagan was thoroughly freshened and disinfected by Thomas Aquinas, but now

his authority re-established orthodox scholasticism, although under the assault of new ideas it did not long enjoy undiminished supremacy.



ARISTOTLE.

(384 B. C.-322 B. C.)

Bust of the statue of the Palace Spada in Rome.¹

The Church had unquestionably made a great stride forward in adopting the teachings of Aristotle, which after all were based upon the most careful observation and the keenest interpretation

¹ See the previous number of *The Open Court*.

of nature. But with this the Church considered that it had given all due consideration to earthly things, for had not Aristotle investigated all nature? Now he was to be cleaned from dust and put under a glass cover; no one was again to lay hand upon his reorganised system, which had been brought into the most beautiful harmony with the doctrines of the Church, for his works had been raised to a rank next to the Bible, as an almost equally authoritative source of knowledge. But the fresh breeze of the dawning Renaissance soon penetrated every crack and crevice of the system and hastened the gradual decay of the mummy.

[TO BE CONCLUDED.]